

2. The system of claim 1 further comprising means for the call to be placed directly to a called party without accessing a special toll number.

3. The system of claim 1 further comprising:

a) means for sending the at least one message to the caller prior to the expiration of the budgeted calling time and amount and terminating the call upon expiration of the budgeted calling time and amount.

4. The system of claim 1 further comprising:

a) means for sending the at least one message to the caller prior to the expiration of the budgeted calling time and amount and continuing the call with a warning to renew or extend the budgeted calling time and amount upon completion of the call.

5. The system of claim 1 further comprising:

a) means for sending the at least one message to the caller prior to the expiration of the budgeted calling time and amount and allowing the call and subsequent calls to continue after expiration of the budgeted calling time and amount subject to the calling costs thereof being billed to the calling customer.

6. The system of claim 1 further comprising:

a) means for sending the at least one message to the caller prior to the expiration of the budgeted calling time and amount and allowing the call to be completed after expiration of the budgeted calling time subject to an additional charge to the customer.

7. The system of claim 1 further comprising;

a) means for enabling the calling customer to pre-pay the budgeted calling time and amount before initiating a call using the budgeted time and amount.

8. The system of claim 1 further comprising:

a) means for enabling the calling customer to pay the budgeted calling time and amount after the budgeted time and amount have been depleted.

9. The system of claim 1 wherein the data bases are distributed throughout the network.

10. The system of claim 1 wherein the databases include stored program instructions for implementing the announcement and monitoring processes in the control process and associated with the call.

11. The system of claim 1 wherein the control processor and voice response unit are connected to a local exchange carrier.

12. The system of claim 1 in which the communication system is a wireless telephone system.

13. In a communication system including a network coupled through local exchange carriers and a network switch to a telephone line uniquely associated with a customer having budgeted telephone calling time and an amount available for telephone calling recorded in the system, a server coupled to the switch for automated control of the customer budgeted telephone calling time and calling costs, comprising:

a) a control processor having access to a rating database and a telephone call routing database; the rating database containing stored information indicating remaining customer prepaid budgeted telephone calling time and cost available to each calling customer; the routing database providing instruction for directing routing of budgeted telephone calls from the calling customers to called customers, after acceptance by the processor;

b) a voice response unit coupled to the processor and the network for sending messages to the calling customer in response to the processor at the beginning of each budgeted telephone call to the called customer indicating remaining budgeted telephone calling time and amount available to the calling customer for the telephone call; and

c) means for tracking the budgeted telephone call in real time and initiating a voice message advising the calling customer when the available time for the telephone call will terminate, using the budgeted calling time and amount.

14. The communication system of claim 1 further comprising:

a) means for disconnecting the budgeted telephone call when the time and cost thereof exceed the available budgeted time and amount for the calling customer.

15. The communication system of claim 1 further comprising;

a) means for extending the telephone call after the telephone call has exceeded the budgeted time and amount and before the telephone call has been terminated.

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16. A method for enabling at least one caller placing a call to a call destination through a communications network via, in part, a telephone line having a number uniquely and permanently assigned to said one caller to budget call costs, comprising the steps of:

a) storing in a rating data base budgeted information for said caller in accordance with said caller's unique and permanently assigned telephone line number;

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31 } b) receiving said call placed by said caller, and in response, establishing said caller's telephone line number;

c) accessing a routing database for a call cost to direct the call to the call destination;

d) accessing the rating data base to retrieve said budgeted information in accordance with the caller's telephone line number;

e) determining from said budgeted information and from said call cost for said call destination, a maximum allowable time length for said call;

f) monitoring the call in progress to determine how much time has elapsed; and

g) providing at least one voice announcement to the caller indicative of the time available to the caller.

17. In a communication system including a network coupled through local exchange carriers and a network switch to at least one caller at a permanently assigned telephone number and having a budgeted telephone calling time and amount available for telephone calling recorded in the system, a method for automated control of the budgeted telephone calls and calling costs, comprising:

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- a) initiating a telephone call in the system at the permanently assigned number by a customer using the budgeted time and amount recorded in the system;
- b) accessing a rating database using a control processor in response to the telephone call; the rating data base containing stored information indicating remaining budgeted telephone calling time and amount available to the calling customer;
- aa) c) accessing a telephone call routing database providing instruction for routing the telephone call from the calling customer to a called customer and calling cost for such call, after the telephone call has been accepted by the processor;
- d) determining from said budgeted information and from said calling cost a maximum allowable time length for said call;
- e) sending a voice message to the calling customer at the beginning of the telephone call to the called customer indicating remaining budgeted telephone calling time and amount available to the calling customer for the telephone call, based upon the maximum allowable time length for said call; and
- f) tracking the telephone call in real time and initiating a voice message advising the calling customer when the available time for the telephone call will terminate.

18. The methods of claims 16 and 17 further comprising the step of:

- g) enabling the caller in advance of the call to select between a first option identified as a "hard-stop" and a second option identified as a "soft-stop" for terminating the call when the budgeted amount for telephone calls has been exceeded.

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19. The methods of claim 18 wherein the "hard-stop" provides the caller a call termination warning in advance of exceeding the budgeted amount, after which the call is terminated or the caller is provided with an alternative for call payment.

20. The methods of claim 19 wherein the "soft-stop" provides the caller, after exceeding the budgeted amount, notice of a change in call payment method while allowing the caller to continue calls in progress and place new calls.

21. A method for interacting with a communication device having an assigned telephone number, comprising the steps of:

deriving said telephone number from a signal received from said communication device when said communication device initiates a call to a destination instrument,

accessing a database which stores information that associates telephone numbers with pre-paid telephone service and retrieving therefrom an amount of said pre-paid telephone service that is associated with said telephone number of said communication device,

establishing a connection between said communication device and said destination instrument when said amount is greater than a first predetermined threshold value, where a cost attributed to said connection increases with time during which said connection is maintained,

repeatedly determining when said cost of said connection comes within a second predetermined threshold of said amount, and

sending an indication to said communication device providing courses of action to be taken upon expenditure of said amount.

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26. The method of claim 21 wherein said indication is audible.

27. The method of claim 21 wherein said indication is a voice message.

28. The method of claim 21 where said amount retrieved from said database has a value, including a zero value, or a null value when said telephone number is not found in said database.

29. The method of claim 21 where said cost is charged against said amount at a preselected point in time.

aa2 30. The method of claim 21 where said first predetermined threshold corresponds to a cost for a predetermined unit of service for said call.

31. The method of claim 22 where said second predetermined threshold is greater than zero.

32. A controller comprising:  
a first module adapted to receive a caller ID and destination number for a call, and to obtain from a database an available amount corresponding to said caller ID;  
a second module adapted to establish a maximum allowable duration for said call, based on said available amount and said destination, when said available amount is sufficient to pay for said initial calling interval;  
a third module adapted to cause establishment of said call, to monitor elapsed time of said call, and to cause an alert to be sent to said caller at a selected time prior to when said elapsed time is equal to said maximum allowable duration; and  
aa3 a fourth module adapted to cause termination of said call to when said elapsed time equals said maximum allowable duration.

33. The controller of claim 32 where said first module provides, during call setup, a message relating to said available amount.

34. The controller of claim 32 where said fourth module is adapted to provide a forewarning message, at a preselected time prior to causing said termination.

35. The controller of claim 34 where said forewarning message includes advice.

36. The controller of claim 32 where said second module is further adapted to block establishment of said call, when an entry is found in said database that corresponds

to said caller's telephone but said available amount is less than necessary to pay for an initial calling interval.

37. A controller comprising:

a first module adapted to receive a caller ID and destination number for a call, and to obtain from a database an available amount corresponding to said caller ID;

a second module adapted to establish a maximum allowable duration for said call, based on said available amount and said destination, when said available amount is sufficient to pay for said initial calling interval;

a third module adapted to cause establishment of said call, to monitor elapsed time of said call, and to cause an alert to be sent to said caller at a selected time prior to when said elapsed time is equal to said maximum allowable duration; and

223 a fourth module adapted to initiate a process for continuing said call and billing said caller separately for said continuing of said call, when said elapsed time equals said maximum allowable duration.

38. The controller of claim 37 where said second module is further adapted to trigger a process to establish said call and have said caller billed separately for said call, when an entry is found in said database that corresponds to said caller's telephone but said available amount is less than necessary to pay for an initial calling interval.

39. A controller comprising:

a first module adapted to receive a caller ID and destination number for a call, and to obtain from a database an available amount and a stop option corresponding to said caller ID;

a second module adapted to establish a maximum allowable duration for said call, based on said available amount and said destination, when said available amount is sufficient to pay for said initial calling interval;

a third module adapted to cause establishment of said call, to monitor elapsed time of said call, and to cause an alert to be sent to said caller at a selected time prior to when said elapsed time is equal to said maximum allowable duration; and

a fourth module adapted

to initiate a process for continuing said call and billing said caller separately for said continuing of said call, when said elapsed time equals said maximum allowable duration and said stop option corresponds to soft-stop service.

to cause termination of said call when said elapsed time equals said maximum allowable duration and said stop option corresponds to hard-stop service.

AA3 40. The controller of claim 39 where said second module is further adapted to trigger a process to establish said call and have said caller billed separately for said call, when said available amount is less than necessary to pay for an initial calling interval but said stop option corresponds to a soft-stop service, and to block establishment of said call, when said available amount is less than necessary to pay for an initial calling interval but said stop option corresponds to a hard-stop service, and

41. The controller of claims 32, 37, and 39, further comprising a fifth module adapted to decrement said available amount in said database in accord with duration portion of said call that is not billed separately.

42. The controller of claims 32, 37, and 39, further comprising said database from which said available amount is retrieved for said caller ID.

43. The controller of claims 32, 37, and 39, further comprising a voice message unit coupled to said controller, outputting said alert to said caller.

44. The controller of claim 43 where said voice message unit is a voice response unit.



45. The controller of claim 43 where said second module is further adapted to trigger said voice message unit to send to said caller a starting-message, effectively at beginning of said call.

46. The controller of claim 43 where said third module causes said voice message unit to send an alert message to said caller when difference between said maximum allowable duration and said elapsed time is less than a predetermined threshold that is greater than zero.

47. The controller of claim 46 where said alert message informs said caller of time remaining before said elapsed time equals said maximum time, or informs said caller of time remaining before said elapsed time equals said maximum time and suggests that said available amount be replenished upon completion of said call.

48. The controller of claim 43 where said voice message unit is adapted to output a variety of messages, and said controller determines which message is outputted.

49. The controller of claim 43 where said voice message unit is adapted to send messages to the caller in a manner that prevents a called party from hearing said message.

50. The controller of claim 39 wherein further comprising separate apparatus for enabling said caller to establish, replenish, or modify said available amount before initiating a call.

51. The controller of claim 39 further comprising a local exchange carrier switch to which said apparatus is connected.

52. The controller of claim 48 where said means comprises apparatus for said caller accessing said database by placing a call to a prearranged number.

53. A method for supporting a call initiated by a caller, to a call destination, through a communications network comprising the steps of:

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- a) pursuant to received information that specifies said destination, and prepaid amount information that is fetched from an entry in a database through a query based on received caller ID information, determining a maximum allowable duration for said call;
  - b) establishing said call between said caller and said destination;
  - c) monitoring duration of said call;
  - d) providing an alert to said caller when said call duration approaches said maximum allowable duration to within a preselected non-zero time interval,;
  - e) when said call is terminated voluntarily by action of said caller or said destination, decrementing said prepaid amount in said entry of said caller ID in said database by an amount corresponding to said call duration at time when said call is terminated, and
  - f) triggering a process for involuntary termination of said call when said call is not terminated by time said call duration equals said maximum allowable duration, or for continuing said call but billing said caller separately for said continuing of said call.

54. The method of claim 53 where said step of establishing includes providing a voice message to said caller related to said maximum allowable duration.

55. The method of claim 53 where said alert is a voice message that is provided in a manner that allows only said caller to hear the voice message.

56. The method of claim 55 where said message informs said caller of time left before said call duration will equal said maximum allowable duration.

57. The method of claim 53 where said step of establishing proceeds to establish said call only when said maximum allowable time is greater than zero, and otherwise blocks said call.